UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,391	07/13/2001	Arthur Berggreen	64645-1052	3767

27045 7590 09/14/2005	EXAMINER
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024	NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/905,391	BERGGREEN, ARTHUR
	Examiner	Art Unit	
	Hanh Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _Amendment filed on 7/1/05_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16,18-36,38-54,56 and 57_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _57_ is/are allowed.

6)☒ Claim(s) _1,12,13,19-21,32,33,50 and 51_ is/are rejected.

7)☒ Claim(s) _2-11,14-16,18,22-31,34-36,38,40-49,52-54 and 56_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _7/13/01&8/19/04_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claims 17, 37 and 55 is withdrawn in view of the newly

discovered reference(s) to Wolff (US Pat. 6,408,006 B1). Rejections based on the newly cited

reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1, 12, 13, 19, 20, 21, 32, 33, 39, 50 and 51 are rejected under 35 USC 103(a) as

being unpatentable over Meggers et al. (Pat. 6,728,270) in view of Wolff (US Pat. 6,408,006

B1).

Regarding claims 1 and 21, Meggers teaches an apparatus (Col. 13, line 42; an

apparatus), for scheduling and admission controlling of real-time and non-real-time data packet

traffic comprising a FIFO queue (Figure 4, col. 11, line 50; a first queue); an EDF queue (Figure

4, col. 11, line 48; a second queue); a Packet Scheduler that includes an Admission Controller

AC (Figure 4; col.11, lines 46-47; a scheduler communicably coupled to the first queue and the

second queue); that determines whether the packet admitted for real-time processing (Figure 5,

step 220; the scheduler having at least a first operating mode or best effort strategy (Figure 5,

step 250; a second operating mode). The FIFO queue is used to receive the admitted data packets

according to a best effort strategy like first-in-first-out (Figure 5; steps 250-260.,col.11, lines 50-

51; receiving the one or more messages, storaging message in the first queue based on a first-in-first-out order) and the data are ready for further processing by an Output Interface OI (Figure 4, col. 12, lines 48-50; scheduling each queued message from the first queue based on the first-in-first-out order); and the EDF queue is used for storing data packet admitted for real-time processing (Figure 5, steps 220-240; col. 11, lines 48-49; receiving the one or more messages, store each message in the second queue based on one or more message attributes), and a time stamp of the EDF queue is set to the delivery deadline (Figure 5, step 240; col. 12, lines 46-48; schedule each queued message from the second queue based on one or more operating criteria). Meggers et al. does not disclose the one or more operating criteria is based on current operating data.

Wolff discloses a scheduling alogorithm (see fig.1,scheduler) coupled to queues 1-3 (a first queue, second queue and a third queue). The scheduling algorithm does not buffer packets that exceed aging limits (scheduling queued messages based on current operating data, see col.4, lines 35-45). Therefore, it would have been obvious to one ordinary skilled in the art to use the teaching of Wollf into the Meggers 's system in order to schedule queued messages based on current operating data. The benefit is to reduce congestion and maintain QOS.

Regarding claims 12, 32 and 50, Meggers teaches all data packets received at the packet scheduler and admitted for real-time processing are forwarded to the EDF queue (Figure 5, step 220., col. 12, lines 31-32). An individual delivery deadline is calculated for each payload data packet (Figure 5, steps 220-240; col. 12, lines 24-25; the second queue is a multi-dimensional queue.

Regarding claims 13, 33 and 51, Meggers teaches for each data packet stored in EDF

queue, an individual delivery deadline is calculated for each payload data packet (Figure 5, steps

220-240; col. 12, lines 24-25). For the read-out, the EDF queue always provides the data packet

with the closet delivery deadline as the highest priority (Col.11, lines 65-66; one or more

messages attributes include a messane priority).

Regarding claim 19, Meggers teaches an Admission Controller AC (Figure 4., col.

11, lines 46-47; a processor), included in Packet Scheduler, admits or rejects a sub- stream of

data packets for real-time processing-an EDF queue for real-time processing and a FIFO queue

for the best effort strategy (Figures 4-5; col.11, lines 46-51 ; communicably coupled to the

scheduler for processing the dispatched messages).

Regarding claim 20, Meggers teaches an Admission Controller AC (Figure 4; col.11,

lines 46-47; a processor), included in Packet Scheduler, admits or rejects a sub-stream of data

packets for real-time processing-an EDF queue (memory) for real-time processing and a FIFO

queue (memory for the best effort strategy (Figures 4-5; col.11, lines 46-51; a memory

communicably coupled to the scheduler for storing the one or more operating criteria).

Regarding claims 21 and 39, Meggers teaches a method (Figure 4; col. 11, line

46; a method and a computer program (Col.14, line 34; a computer program), for scheduling and

admission controlling of real-time and non-real-time data packet traffic, comprising, receiving

the message from Admission Controller AC (Figures 4-5, col. 11, lines 46-51; receiving one or

more messages), selecting a FIFO queue for input and output for data packets to be processed

according to the best effort strategy (Figure 4; col. 11, lines 49-51; selecting a first queue for

input and output during a first operating mode); selecting an EDF queue for input and output for

data packets required for real-time processing (Figure 4; col. 11, lines 48-49; selectinq a second

queue for input and output during a second operating mode); storing the rejected data packets

(Figure 5; steps 210-250; col.12, lines 33-35; whenever the first queue is selected for input), that

are not required for the real-time processing, according to a best effort strategy in the FIFO

queue based on first-in-first-out order (Figure 5; step 260; col.12, lines 33-35; storing each

messane in the first queue based on a first-in-first-out order), storing the admitted data packets

(Figure 5; steps 210-220; col.12, lines 30-32; whenever the second queue is selected for input),

that are required for the real-time processing, in the EDF queue based on the calculated deadline

for each packet (Figure 5; steps 230-240; col.12, lines 25-26, 46-48; storing each message in the

second queue based on one or more message attributes); the Packet Scheduler includes an Output

Interface OI, which prioritizes data packets contained in the FIFO and EDFqueues for the further

processing (Col. 12, lines 8-10; scheduling each queued messaqe whenever the queue is selected

for output). This comprises the choice of a queue, the read-out of a data packet from this queue

and the provision of the data packet for the further processing (Col.12, lines 8-12). For the read-

out, for data packets in the FIFO queue will be read out based on the first-in-first-out order (Col.

11, lines 49-51; schedulinq each queued message from the first queue based on the first-in-first-

out order) or for data packets in the EDF queue based on closest deliver deadline (Col.11, lines

65-66; scheduling each queued message from the second queue based one or more or more

oerating criteria).

Meggers et al. does not disclose the one or more operating criteria is based on current

operating data.

Wolff discloses a scheduling alogorithm (see fig.1,scheduler) coupled to queues 1-3 (a first queue, second queue and a third queue). The scheduling algorithm does not buffer packets that exceed aging limits (scheduling queued messages based on current operating data, see col.4, lines 35-45). Therefore, it would have been obvious to one ordinary skilled in the art to use the teaching of Wollf into the Meggers 's system in order to schedule queued messages based on current operating data. The benefit is to reduce congestion and maintain QOS.

Allowable Subject Mader

Claims 2-11, 14-16, 18, 22-31, 34-36, 38, 40-49 and 52-54 and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
Claim 57 is allowed.

Response to Arguments

Applicant's arguments with respect to claims 1, 12,13, 19-21, 32, 33, 39, 50, 51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

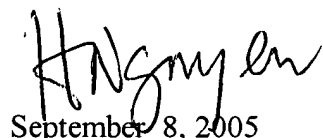Dighe (Pat. 4979165) and Kim et al. (Pat. 5446738)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The

examiner can normally be reached on Monday-FRiday from 8:30 4:30.The examiner can also be

reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou, can be reached on 5712723092. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

September 8, 2005

HANH NGUYEN
. **PRIMARY EXAMINER**